

JUN 13 2019

**PLANNING BOARD
GRAFTON, MA**



100 GROVE ST. WORCESTER, MA 01605

June 13, 2019

Joseph Laydon
Town Planner
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

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**Subject: 155 George Hill Road Solar Facility
Special Permit, Site Plan and Stormwater Management Regulations Review**

Dear Joe and Conservation Commissioners:

We received the following documents on May 2, 2019:

- Plans entitled Definitive Site Plan "155 George Hill Road Solar Facility" dated April 24, 2019, prepared by Summit Engineering & Survey, Inc. for Industria Engineering (16 sheets)
- Bound document entitled Application for Special Permit and Site Plan Approval and Scenic Road Permit, Photovoltaic Solar Energy Generation and Storage Facility, 155 George Hill Road, Grafton, MA dated April 24, 2019, prepared by Industria Engineering.
- Bound document entitled Stormwater Management Submittal for Industria Solar Panel Project, George Hill Rd. dated April 23, 2019, prepared by Summit Engineering & Survey, Inc. for Industria Engineering, LLC.

We also received the following documents on May 20, 2019:

- Plans entitled Definitive Site Plan "155 George Hill Road Solar Facility" dated April 24, 2019 and revised May 16, 2019, prepared by Summit Engineering & Survey, Inc. for Industria Engineering (16 sheets)
- E-mail correspondence from Industria Engineering to the Grafton Planning Board dated May 17, 2019, Re: Response to Completeness Review by Town Planner.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through October 15, 2018; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices on behalf of the Planning Board. GEI has also been requested to review and comment on the documents' conformance with applicable Conservation Commission "Regulations Governing Stormwater Management" dated May 2013 on behalf of the Conservation Commission. GEI was authorized to proceed on May 8, 2019. As part of this review GEI visited the site on June 11, 2019. The comments herein pertain to the latest version of the documents received.

Our comments follow:

X:\Shared\Projects\GraftonPB\GeorgeHillRoad155\1061319ghr.doc

Zoning By-Law

1. A north arrow needs to be provided on sheets 1, 4 and 12. (§1.3.3.d.8)
2. The Board may wish to inquire about the applicant's intentions for employee parking during the construction phase of the project. George Hill Road is a narrow road; on-street parking could affect vehicular traffic, especially for larger vehicles such as emergency vehicles. No vehicle parking should occur along George Hill Road. (§1.3.3.1)

Regulations Governing Stormwater Management

3. The plans do not show the locations for construction-phase parking. (§7.B.2.f)
4. The plans don't address the storage of construction-phase waste materials. Of particular concern is the storage of waste packaging material and the potential for windblown trash. (§7.B.2.j)
5. GEI recommends that the erosion control plans include intermediate erosion controls (e.g. straw wattles) at $\pm 100'$ spacing on slopes greater than 10% and at $\pm 200'$ -foot spacing on slopes of 3-10%.

Hydrology & MassDEP Stormwater Management

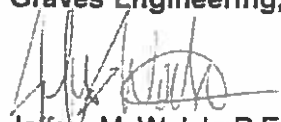
6. GEI reviewed the hydrology computations and found them to be in order.
7. The scale of the subcatchment map for Basins B & C is incorrect. Furthermore, time of concentration paths should be shown on the drainage maps.
8. Compliance with the MassDEP Stormwater Standards and Stormwater Handbook is reasonable.

General Engineering

9. During my site visit, I observed what appeared to be a healthy 30 to 36" diameter Hickory tree in the middle of the staked driveway entrance. Consideration should be given to relocating the driveway entrance farther to the south where large-diameter trees are not present. Such a driveway relocation would also provide better separation between the driveway and the inlet of an existing corrugated metal culvert that crosses George Hill Road.
10. Information such as the size and material of the proposed drainage pipes need to be provided. Invert elevations need to be provided for the culverts along the driveway
11. A turn-around area was not provided at the entrance gate to the solar array. A turn-around area should be provided outside of the fence that will allow emergency vehicles to reverse direction without having to enter the fenced area.
12. A project identification sign including owner and emergency contact information needs to be placed at or mounted on the entrance gate.
13. If not already done, the Planning Board may wish to solicit comments from the Grafton Fire Department.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,
Graves Engineering, Inc.

A handwritten signature in black ink, appearing to read 'Jeffrey M. Walsh', is written over the company name.

Jeffrey M. Walsh, P.E.
Principal

cc: Andrew Baum, P.E.; Summit Engineering & Survey, Inc.
Michael Lotti; Industria Engineering, Inc.